

IN THE CLAIMS

Please cancel Claims 1 to 67 without prejudice and insert therefor the following new

Claims:

Please add the following new claims:

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-- 68. A recombinant protein whose essential constituent polypeptide sequence comprises:

a 19 kilodalton (p19) C-terminal fragment of the surface protein 1 of the merozoite form (MSP-1 protein) of a *Plasmodium* parasite that is infectious in man, other than *Plasmodium vivax*, wherein said C-terminal fragment remains anchored to the surface of said *Plasmodium* parasite at the end of its penetration phase into human erythrocytes during an infectious cycle; or a portion of said 19 kilodalton (p19) C-Terminal fragment, other than a fragment from *Plasmodium vivax*, which induces an immune response which can inhibit parasitemia *in vivo* in a host infected with said *Plasmodium* parasite; wherein said recombinant protein comprises conformational epitopes recognized by human antisera and is unstable in a reducing agent.

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69. The recombinant protein of Claim 68, which is not recognized by said human antisera when said recombinant protein is in a reduced form.

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70. The recombinant protein of Claim 68, wherein said recombinant protein has the atomic coordinates in Annexes I, II or III ; and the NMR fingerprints of Figures 12.0 A to 12.2 C.

71. The recombinant protein of Claim 68, which elicits a long term memory response against said conformational epitopes in animals.

72. The recombinant protein of Claim 68, which does not contain a polypeptide having a sequence of amino acids in the C-Terminal region of p33 (33 kDa N-terminal fragment).

73. The recombinant protein of Claim 68, which comprises, upstream of said 19 kilodalton (p19) C-terminal fragment, a polypeptide region containing less than 50 amino acids of a C-terminal region of p33.

74. The recombinant protein of Claim 73, wherein said polypeptide region is the C-terminal region of p33 resulting from the cleavage of p42 of the same MSP-1 protein.

75. The recombinant protein of Claim 73, wherein said polypeptide region contains less than 10 amino acid residues.

76. The recombinant protein of Claim 74, wherein said C-terminal region is that region that is conserved in *P. falciparum*.

77. The recombinant protein of Claim 68 or Claim 69, wherein said recombinant protein contains the two EGF regions of the p19 protein.

78. The recombinant protein of Claim 70, wherein said recombinant protein contains the two EGF regions of the p19 protein.

79. The recombinant protein of Claim 71, wherein said recombinant protein contains the two EGF regions of the p19 protein.

80. The recombinant protein of Claim 72, wherein said recombinant protein contains the two EGF regions of the p19 protein.

81. The recombinant protein of Claim 73, wherein said recombinant protein contains the two EGF regions of the p19 protein.

82. The recombinant protein of Claim 74, wherein said recombinant protein contains the two EGF regions of the p19 protein.

83. The recombinant protein of Claim 75, wherein said recombinant protein contains the two EGF regions of the p19 protein.

84. The recombinant protein of Claim 76, wherein said recombinant protein contains the two EGF regions of the p19 protein.

85. The recombinant protein of Claim 68, wherein said polypeptide has a glycosylphosphatidylinositol group which anchors the p19 fragment to the membrane of a eukaryotic cell infected with the MSP-1 protein.

86. The recombinant protein of Claim 85, which is hydrosoluble.

87. The recombinant protein of Claim 68, wherein said polypeptide comprises the amino acid sequence of the p19 of the MSP-1 protein from *Plasmodium falciparum*.

88. The recombinant protein of Claim 68, wherein said polypeptide comprises the amino acid sequence of the p19 of the MSP-1 protein from *Plasmodium cynomolgi*.

89. A recombinant protein whose essential constituent polypeptide sequence comprises:

a 19 kilodalton (p19) C-terminal fragment of the surface protein 1 of the merozoite form (MSP-1 protein) of a *Plasmodium* parasite that is infectious in man, other than *Plasmodium vivax*; or a portion of said 19 kilodalton (p19) C-Terminal fragment, other than a fragment from *Plasmodium vivax*, which induces an immune response which can inhibit parasitemia *in vivo* in a host infected with said *Plasmodium* parasite; wherein said recombinant protein comprises conformational epitopes recognized by human antisera and is unstable in a reducing agent.

90. An oligomer of the recombinant protein of Claim 68.

91. The oligomer of Claim 90, wherein said oligomer comprises from 2 to 50 monomer units of a sequence of said recombinant protein.

92. The recombinant protein of Claim 68, which is conjugated to a carrier molecule.

93. A vaccinating composition against a *Plasmodium* parasite which is infectious in man, comprising as an active principle a recombinant protein whose essential constituent polypeptide sequence comprises: a 19 kilodalton (p19) C-terminal fragment of the surface protein 1 of the merozoite form (MSP-1 protein) of a *Plasmodium* parasite that is infectious in man, other than *Plasmodium vivax*, wherein said C-terminal fragment remains anchored to the surface of said *Plasmodium* parasite at the end of its penetration phase into human erythrocytes during an infectious cycle; or a portion of said 19 kilodalton (p19) C-Terminal fragment, other than a fragment from *Plasmodium vivax*, which induces an immune response which can inhibit parasitemia *in vivo* in a host infected with said *Plasmodium* parasite; wherein said recombinant protein comprises conformational epitopes recognized by human antisera and is unstable in a reducing agent.

94. The vaccinating composition of Claim 93, wherein said recombinant protein is not recognized by human antisera in reduced form.

9-8-98 95. The vaccinating composition of Claim 93, wherein said recombinant protein has the atomic coordinates in Annexes I, II or III; and the NMR fingerprints of Figures 12.0 A to 12.2 C.

96. The vaccinating composition of Claim 93, which elicits a long term memory response against said conformational epitopes in animals.

97. The vaccinating composition of Claim 93, which does not contain a polypeptide having a sequence of amino acids in the C-Terminal region of p33 (33 kDa N-terminal fragment).

98. The vaccinating composition of Claim 93, which comprises, upstream of said 19 kilodalton (p19) C-terminal fragment, a polypeptide region containing less than 50 amino acids of a C-terminal region of p33.

99. The vaccinating composition of Claim 98, wherein said polypeptide region is the C-terminal region of p33 resulting from the cleavage of p42 of the same MSP-1 protein.

100. The vaccinating composition of Claim 98, wherein said polypeptide region contains less than 10 amino acid residues.

101. The vaccinating composition of Claim 99, wherein said C-terminal region is that region that is conserved in *P. falciparum*.

102. The vaccinating composition of Claim 93, wherein said recombinant protein contains the two EGF regions of the p19 protein.

103. The vaccinating composition of Claim 94, wherein said recombinant protein contains the two EGF regions of the p19 protein.

104. The vaccinating composition of Claim 95, wherein said recombinant protein contains the two EGF regions of the p19 protein.

105. The vaccinating composition of Claim 96, wherein said recombinant protein contains the two EGF regions of the p19 protein.

106. The vaccinating composition of Claim 97, wherein said recombinant protein contains the two EGF regions of the p19 protein.

107. The vaccinating composition of Claim 98, wherein said recombinant protein contains the two EGF regions of the p19 protein.

108. The vaccinating composition of Claim 99, wherein said recombinant protein contains the two EGF regions of the p19 protein.

109. The vaccinating composition of Claim 100, wherein said recombinant protein contains the two EGF regions of the p19 protein.

110. The vaccinating composition of Claim 101, wherein said recombinant protein contains the two EGF regions of the p19 protein.

111. The vaccinating composition of Claim 93, wherein said polypeptide has a glycosylphosphatidylinositol group which anchors the p19 fragment to the membrane of a eukaryotic cell infected with the MSP-1 protein.

112. The vaccinating composition of Claim 111, which is hydrosoluble.

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113. A vaccinating composition against a *Plasmodium* parasite which is infectious in man, comprising as an active principle a recombinant protein whose essential constituent polypeptide sequence comprises: a 19 kilodalton (p19) C-terminal fragment of the surface protein 1 of the merozoite form (MSP-1 protein) of a *Plasmodium* parasite that is infectious in man, other than *Plasmodium vivax*; or a portion of said 19 kilodalton (p19) C-Terminal fragment, other than a fragment from *Plasmodium vivax*, which induces an immune response which can inhibit parasitemia *in vivo* in a host infected with said *Plasmodium* parasite; wherein said recombinant protein comprises conformational epitopes recognized by human antisera and is unstable in a reducing agent.

114. The vaccinating composition of Claim 93, wherein said polypeptide comprises the amino acid sequence of the p19 of the MSP-1 protein from *Plasmodium falciparum*.

115. The vaccinating composition of Claim 93, wherein said polypeptide comprises the amino acid sequence of the p19 of the MSP-1 protein from *Plasmodium cynomolgi*.

116. The vaccinating composition of Claim 93, which is conjugated to a carrier molecule.--